

10/532441

JC20 Rec'd PCT/PTO 22 APR 2005

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SEQUENCE LISTING

<110> The Trustees of the University of Pennsylvania  
<120> Identification of Antimycobacterial targets and the Inhibition  
Thereof as a Treatment for Infectious Diseases  
<130> UPFT0001-100  
<150> PCT/US03/33524  
<151> 2003-10-22  
<150> US 60/420,131  
<151> 2002-10-22  
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<170> PatentIn version 3.2  
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<212> PRT  
<213> M. tuberculosis H37RV  
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His Leu Phe Gln Pro Leu Leu Tyr Gln Val Ala Thr Gly Ile Ile Ser  
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Glu Gly Glu Ile Ala Pro Pro Thr Arg Val Val Leu Arg Lys Gln Arg  
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Asn Val Gln Val Leu Leu Gly Asn Val Thr His Ile Asp Leu Ala Gly  
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Gln Cys Val Val Ser Glu Leu Leu Gly His Thr Tyr Gln Thr Pro Tyr  
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Leu Glu Leu Arg Gly Arg Ile Leu Ser Ala Phe Glu Gln Ala Glu Arg  
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245 250 255Ile Thr Val Lys Asp Ser Asp Gly Thr Val Arg Arg Ile Glu Ser Ala  
260 265 270Cys Lys Val Trp Ser Ala Gly Val Ser Ala Ser Arg Leu Gly Arg Asp  
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290 295 300Val Leu Pro Asp Leu Ser Ile Pro Gly Tyr Pro Asn Val Phe Val Val  
305 310 315 320Gly Asp Met Ala Ala Val Glu Gly Val Pro Gly Val Ala Gln Gly Ala  
325 330 335Ile Gln Gly Ala Lys Tyr Val Ala Ser Thr Ile Lys Ala Glu Leu Ala  
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His Leu Phe Gln Pro Leu Leu Tyr Gln Val Ala Thr Gly Ile Leu Ser  
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Glu Gly Asp Ile Ala Pro Thr Thr Arg Leu Ile Leu Arg Arg Gln Lys  
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Gln Thr Val Thr Ser Lys Leu Met Asp Met Thr Thr Val Thr Pro Tyr  
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Asp Glu Phe Ala Thr Phe Ala Pro Gly Met Lys Thr Ile Asp Asp Ala  
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Val Glu Val Gln Leu Asn Ala Met Val Thr Ala Val Asp Tyr Lys Gly  
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Cys Lys Val Trp Ala Ala Gly Val Ala Ala Ser Pro Leu Gly Lys Met  
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Val Gly Asp Leu Met Phe Val Pro Gly Val Pro Gly Val Ala Gln Gly  
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Lys Gly Ser Met Ala Thr Ile Ser Arg His Ser Ala Val Ala Gln Val  
370 375 380

Gly Lys Leu Glu Phe Ala Gly Tyr Phe Ala Trp Leu Ala Trp Leu Val  
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Leu His Leu Val Tyr Leu Val Gly Tyr Arg Asn Arg Ile Ala Ala Leu  
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Phe Ala Trp Gly Ile Ser Phe Met Gly Arg Ala Arg Gly Gln Met Ala  
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Ile Thr Ser Gln Met Ile Tyr Ala Arg Leu Val Met Thr Leu Met Glu  
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Val Ser Thr Val Glu Leu Thr Lys Ser Gly Ala Trp Cys Val Ala Ala  
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Asp Phe Ser Val Gly Met Leu Ala Ala Gly Ala Ala Arg Lys Val Pro  
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Lys Val Ala Gly Asp Ala Thr Arg Leu Pro Phe Gly Asp Asp Val Phe  
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Asp Ala Val Thr Ile Ser Phe Gly Leu Arg Asn Val Ala Asn Gln Gln  
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Ala Ala Leu Arg Glu Met Ala Arg Val Thr Arg Pro Gly Gly Arg Leu  
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Leu Val Cys Glu Phe Ser Thr Pro Thr Asn Ala Leu Phe Ala Thr Ala  
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Tyr Lys Glu Tyr Leu Met Arg Ala Leu Pro Arg Val Ala Arg Ala Val  
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Ser Ser Asn Pro Glu Ala Tyr Glu Tyr Leu Ala Glu Ser Ile Arg Ala  
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Trp Pro Asp Gln Ala Val Leu Ala His Gln Ile Ser Arg Ala Gly Trp  
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35 40 45

Thr Trp Asp Leu Phe Arg Tyr Pro Gly Val Arg Ser Asp Ser Ser Ile  
50 55 60

Phe Thr Leu Pro Phe Pro Tyr Glu Pro Trp Thr Arg Glu Glu Gly Ile  
65 70 75 80

Ala Asp Gly Ala His Ile Arg Glu Tyr Leu Thr Asp Met Ala His Lys  
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Tyr Gly Ile Asp Arg His Ile Glu Phe Asn Ser Tyr Val Arg Ala Ala  
100 105 110

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Asp Trp Asp Ser Ser Thr Asp Thr Trp Thr Val Thr Phe Glu Gln Asn  
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Gly Val His Lys His Tyr Arg Ser Arg Phe Val Phe Phe Gly Ser Gly  
130 135 140

Tyr Tyr Asn Tyr Asp Glu Gly Tyr Thr Pro Asp Phe Gly Gly Ile Glu  
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Lys Phe Gly Gly Ala Val Val His Pro Gln His Trp Pro Glu Asp Leu  
165 170 175

Asp Tyr Thr Gly Lys Lys Ile Val Val Ile Gly Ser Gly Ala Thr Ala  
180 185 190

Val Thr Leu Ile Pro Ser Leu Thr Asp Arg Ala Glu Lys Val Thr Met  
195 200 205

Leu Gln Arg Ser Pro Thr Tyr Leu Ile Ser Ala Ser Lys Tyr Ser Thr  
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Phe Ala Ala Val Val Arg Lys Ala Leu Pro Pro Lys Thr Ser His Leu  
225 230 235 240

Ile Val Arg Met Tyr Asn Ala Leu Leu Glu Ala Val Phe Trp Phe Leu  
245 250 255

Ser Arg Lys Thr Pro Val Phe Val Lys Trp Leu Leu Arg Arg Thr Ala  
260 265 270

Ile Lys Asn Leu Pro Glu Gly Tyr Asp Ile Glu Thr His Phe Thr Pro  
275 280 285

Arg Tyr Asn Pro Trp Asp Gln Arg Leu Cys Leu Ile Pro Asp Ala Asp  
290 295 300

Leu Tyr Asn Ala Ile Thr Ser Gly Arg Ala Glu Val Val Thr Asp His  
305 310 315 320

Ile Asp His Phe Asp Ala Thr Gly Ile Ala Leu Lys Ser Gly Gly His  
325 330 335

Leu Asp Ala Asp Ile Ile Val Thr Ala Thr Gly Leu Gln Leu Gln Ala  
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Leu Gly Gly Ala Ala Ile Ser Leu Asp Gly Val Glu Ile Asp Pro Arg  
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Met Thr Ala Arg Ala Thr Ala Lys Leu Leu Ala His Met Ala Ala His  
 405 410 415

Gly His Thr Arg Ala Ala Pro His Leu Gly Asp Glu Pro Met Asp Glu  
 420 425 430

Lys Pro Ser Trp Asp Ile Gln Ala Gly Tyr Val Lys Arg Ala Pro Tyr  
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Ala Leu Pro Lys Ser Gly Thr Lys Arg Pro Trp Asn Val Arg Gln Asn  
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Glu Gly Gly Ala Ala Ala Val Thr Gly Asp Asp Asp Ser Leu Asp Glu  
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His Ala His Asp Thr Val Ser Gly Gly Asp Trp Leu Cys Asp Gln Asp  
 65 70 75 80

Ala Val Glu Ala Phe Val Ala Glu Ala Pro Lys Glu Leu Val Gln Leu  
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Glu His Trp Gly Cys Pro Trp Ser Arg Lys Pro Asp Gly Arg Val Ala  
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115 120 125

Asp Lys Thr Gly Phe His Leu Leu His Thr Leu Phe Gln Arg Leu Leu  
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Thr Tyr Ser Asp Val Met Arg Tyr Asp Glu Trp Phe Ala Thr Thr Leu  
145 150 155 160

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165 170 175

Thr Gly Arg Ile Glu Thr Ile Leu Ala Asp Ala Val Ile Leu Cys Thr  
180 185 190

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195 200 205

Thr Gly Asp Gly Met Ala Leu Ala Phe Arg Ala Gly Ala Pro Leu Lys  
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Asp Met Glu Phe Val Gln Tyr His Pro Thr Gly Leu Pro Phe Thr Gly  
225 230 235 240

Ile Leu Ile Thr Glu Ala Ala Arg Ala Glu Gly Gly Trp Leu Leu Asn  
245 250 255

Lys Asp Gly Tyr Arg Tyr Leu Gln Asp Tyr Asp Leu Gly Lys Pro Thr  
260 265 270

Pro Glu Pro Arg Leu Arg Ser Met Glu Leu Gly Pro Arg Asp Arg Leu  
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Ser Gln Ala Phe Val His Glu His Asn Lys Gly Arg Thr Val Asp Thr  
290 295 300

Pro Tyr Gly Pro Val Val Tyr Leu Asp Leu Arg His Leu Gly Ala Asp  
305 310 315 320

Leu Ile Asp Ala Lys Leu Pro Phe Val Arg Glu Leu Cys Arg Asp Tyr  
325 330 335

Gln His Ile Asp Pro Val Val Glu Leu Val Pro Val Arg Pro Val Val  
340 345 350

His Tyr Met Met Gly Gly Val His Thr Asp Ile Asn Gly Ala Thr Thr  
355 360 365

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405 410 415

Lys Ser Asp Arg Gly Pro Ser Ser Ala Val Arg Ala Gln Ala Arg Thr  
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Glu Ala Leu Arg Leu Glu Arg Glu Leu Ser Arg His Gly Gln Gly Gly  
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Glu Glu Ser Arg Gly Ala His Gln Arg Thr Asp Phe Pro Asn Arg Asp  
530 535 540

Asp Glu His Phe Leu Ala His Thr Leu Val His Arg Glu Ser Asp Gly  
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